

AF/1772

PTO/SB/17 (10-03)

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FEE TRANSMITTAL
for FY 2004

Effective 01/01/2003. Patent fees are subject to annual revision.

Claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)**340.00****Complete if Known**

Application Number	09/869,094
Filing Date	September 18, 2001
First Named Inventor	Gervasio MERCURI
Examiner Name	Catherine Simone
Art Unit	1772
Attorney Docket No.	010414.50147US

METHOD OF PAYMENT (check all that apply)
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☐ Charge any additional fee(s) during the pendency of this application.☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1001 770	2001 385	Utility filing fee
1002 340	2002 170	Design filing fee
1003 530	2003 265	Plant filing fee
1004 770	2004 385	Reissue filing fee
1005 160	2005 80	Provisional filing fee

Fee Paid

SUBTOTAL (1)**2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

	Extra Claims	Fee from below	Fee Paid
Total Claims	-20** =	x	=
Indep. Claims	-3** =	x	=
Multiple Dependent			=

Large Entity Small Entity

Fee Code (\$)	Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) \$

**or number previously paid, if greater; For Reissues, see above.

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1051 130	2051 65	Surcharge - late filing fee or oath
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet
1053 130	1053 130	Non-English specification
1812 2,520	1812 2,520	For filing a request for <i>ex parte</i> reexamination
1804 920*	1804 920*	Requesting publication of SIR prior to Examination action
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action
1251 110	2251 55	Extension for reply within first month
1252 420	2252 210	Extension for reply within second month
1253 950	2253 475	Extension for reply within third month
1254 1,480	2254 740	Extension for reply within fourth month
1255 2,010	2255 1,005	Extension for reply within fifth month
1401 330	2401 165	Notice of Appeal
1402 330	2402 165	Filing a brief in support of an appeal
1403 290	2403 145	Request for oral hearing
1451 1,510	1451 1,510	Petition to institute a public use proceeding
1452 110	2452 55	Petition to revive - unavoidable
1453 1,330	2453 665	Petition to revive - unintentional
1501 1,330	2501 665	Utility issue fee (or reissue)
1502 480	2502 240	Design issue fee
1503 640	2503 320	Plant issue fee
1406 130	1460 130	Petitions to the Commissioner
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)
1806 180	1806 180	Submission of Information Disclosure Stmt
8021 40	8021 40	Recording each patent assignment per property (times number of properties)
1809 770	2809 385	Filing a submission after final rejection (37 CFR § 1.129(a))
1810 770	2810 385	For each additional invention to be examined (37 CFR § 1.129(b))
1801 770	2801 385	Request for Continued Examination (RCE)
1802 900	1802 900	Request for expedited examination of a design application

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

Fee Paid

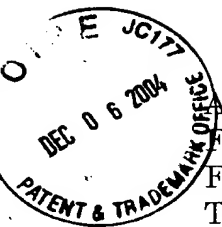
340.00**340.00****SUBMITTED BY****Complete (if applicable)**

Name (Print/Type)	Vincent J. Sunderdick	Registration No. (Attorney/Agent)	32,169	Telephone	202-624-2500
Signature		Date	December 6, 2004		

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 09/869,094 Confirmation No. : 1011
First Named Inventor : Gervasio MERCURI
Filed : September 18, 2001
TC/A.U. : 1772
Examiner : Catherine Simone

Docket No. : 010414.50147US
Customer No. : 23911

Title : Meat Product Casing Having a Maximum Extensible
Diameter

APPEAL BRIEF

Mail Stop Appeal Brief-Patents

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

On October 6, 2004, Appellants appealed to the Board of Patent Appeals from the final rejection of claims 45-66. The following is Appellants' Appeal Brief submitted pursuant to 37 C.F.R. § 1.192.

REAL PARTY IN INTEREST

Ennio Pty Ltd, 2 Pennia Avenue, Glynde, S.A. 5070, Australia

RELATED APPEALS AND INTERFERENCES

There are no known Appeals or Interferences known to Appellant related to the above-identified application.

STATUS OF CLAIMS

This application contains claims 45-66 with claims 1-44 having been cancelled.

STATUS OF AMENDMENTS

Subsequent to the Final Patent Office Action of July 6, 2004 no amendments were submitted and the status of the claims remains as in the

February 19, 2004 Amendment under 37 C.F.R. § 1.111.

SUMMARY OF THE INVENTION

The presently claimed invention concerns a tubular casing having a predetermined maximum extendable diameter. Such tubular products include knitted netting or elastic knitted fabric casing used in cooking and curing processes for meat products. The processed meat is packed in pieces into the tube and held together during the cooking process, although such tubing can also be used on cured meat products. The machines which perform the function of filling the tubular casing usually have a hollow cylindrical mandrill for receiving meat product which is pumped or forced under pressure through the tube into the casing so that the casing is drawn out from the stuffing tube as the meat product is extruded from the tube.

The present invention improves over the prior art by providing a tubular casing which resists expansion beyond a preset diameter. The prior art products have difficulty maintaining a constant diameter of the resultant product as the case is being filled. Normally prior art tube netting is able to expand to a large diameter with a control of the pressure at which the meat product is pumped through the tube being the process for establishing control of the diameter. Therefore, many filled casings have a variable diameter because of the difficulty of controlling the pressure. These diameters cause difficulty with an undesirable product not only with respect to appearance, but also with regard to a requirement that certain slicing machines are set to a particular preset diameter and if the product has variable diameter it is unsuitable for the slicing mechanism.

The present invention accomplishes this control of the tubular casing by providing circumferential threads along the length of the tubular casing which become tight at a preset diameter so that the tubular casing has a predetermined diameter when filled with food products. As defined by independent claim 45, the objectives of the present invention are accomplished by extending

circumferential threads around the tubular casing and spacing those threads at intervals along the casing. These threads include an elastic thread in combination with a yarn wrapped around the thread with the number of turns of the yarn for any given unit length of the threads being determined as a function of the elastic limit of the elastic thread. As a result, the circumferential threads become tight after a previously determined amount of stretch because the yarn is straightened to such an extent that the yarn resists tensile force at which point the threads are no longer able to be extended, as claimed, this occurs before the elastic limit of the elastic thread is reached.

The elastic thread has a known elastic limit and the number of turns of the yarn for a given length of the circumferential thread are determined so that the yarn will resist tensile force to therefore reach the tubular structure casing limit. This predetermined limit allows for ease of maintaining substantially constant diameter of the tubular structure casing. The yarn wrapped around the elastic thread forms a helix or spiral as shown in Figures 1 and 2. As the elastic thread is stretched, the spiral expands so that the helix angle increases to enable stretching. At the same time, the diameter of the helix or spiral is reduced and if a number of turns of yarn per centimeter of the thread is limited, then the lengthwise expansion of the helix and its continual reduction in diameter will result in the limit being reached whereby further tensile force applied to the thread is resisted by the yarn. Once this tensile force is resisted by the yarn, the elastic thread will not be able to stretch any further and the elastic limit is determined by the number of turns of yarns per centimeter around the thread.

ISSUES

The issues to be decided by the Board of Patent Appeals and Interferences ("the Board") include (1) whether independent claim 45 and dependent claims 46, 47, 54,57 and 63-66 are properly rejected under 35 U.S.C. §102 as anticipated by Levin (U.S. Patent No.: 3,866,444; (2) whether claims 45-47, 54-57 and 63-66 are properly rejected under 35 U.S.C. §102 as anticipated by Krauss (U.S. Patent

No.: 3,248,905); (3) whether dependent claims 48-52 and 58 are properly rejected under 35 U.S.C. §103 as being unpatentable over Levin '444 in view of Mercuri (U.S. Patent No.: 5,712,007); (4) whether dependent claims 53 and 59-62 are properly rejected under 35 U.S.C. §103 as being unpatentable over Levin '444 in view of Mercuri '007 and in view of Mintz (U.S. Patent No.: 5,855,231); and (5) whether claims 53 and 59-62 are properly rejected under 35 U.S.C. §103 as being unpatentable over Kraus '905 in view of Mercuri '007 and Mintz '231.

GROUPING OF CLAIMS

Claims 46-57 and 63-64 do not stand or fall together with independent claim 45.

ARGUMENTS

The rejection of independent claim 45 as anticipated by Levin '444 in the final rejection is based on an indication that Levin teaches an elastic thread in Figure 5, 12b in combination with a yarn 12c and 12d wrapped around and along the length of the elastic thread. The conclusion of the Examiner is that it is inherent that a number of turns of the yarn are provided around elastic thread for a given length of the circumferential threads so that the circumferential become taut after a predetermined amount of stretch so that the threads become inextensible before the elastic limit of the thread is reached.

The reference to Levin has a wrapping of a strand of rubber using a first wrapping thread in a first direction and a second wrapping in an opposite direction. Appellants submit that there is no indication in Levin concerning a limit on the number of turns of yarn for a given length of elastic thread. The specification of Levin particularly states that when extended, the diameter of the rubber decreases and the covered strands become spaced apart. There is no indication that the stretching limit results from the outer threads being placed in tension. Instead, the stretching limit of the elastic thread itself is what determines the limit of the stretch in Levin. The yarn wrapping of Levin will accommodate any stretch which is allowed by the elastic thread and not by any

tension on the outer threads. Additionally, the further limiting feature of independent claim 45 that the thread becomes “inextensible before the elastic limit of the elastic thread is reached” still further defines over the reference to Levin. Additionally, the given length of circumferential threads are claimed as “determined as function of an elastic limit of the elastic thread”. It can be seen that there is a clear nexus between the number of threads and the amount of extension in the present invention and it can be further seen that once the elastic limit of the elastic thread is determined, then the number of turns of yarn can be determined for each length thread in order that the “maximum” extent of the yarn is reached before the “maximum” extent of the thread, in order to provide the desired result.

This specific limitations of independent claim 45 are not available from Levin. Levin discloses a standard method commonly used in the industry for wrapping a strand of rubber with cotton thread. The purpose of the cotton is to cover the rubber thread for use in food applications and is not used, designed or able to restrict the extent of the stretch of the elastic thread. The windings are such that the elastic is stretched to the same extent that it would be stretched without the covering of Levin.

Thus, it is submitted that claim 45 defines over any showing of Levin.

Concerning dependent claim 46, Appellants submit that item 10 in Figure 1 of Levin refers to the entire assembly. The mesh fabric referred to at column 2, line 39 is the combination of the longitudinal and circumferential members 11 and 12. Additionally, Appellants submit that the Examiner has incorrectly stated as the reference to Levin as an open net which would not be impermeable to food products. Claims 57, 64, 65 and 66 are also submitted as allowable as the longitudinal threads of Levin are secured between circumferential members and are not shown or described as fixed to the outer surface of a knitted tub as claimed. Remaining dependent claims depend from and contain all of the limitations of independent claim 45.

With respect to the rejection of claims 45-47, 54-57 and 63-66 as anticipated by Krauss '905, Krauss has been cited for showing a limited number of turns of the yarn in Figure 4 around the elastic thread. There is no showing of a relationship between the number of turns and the elastic limit of the elastic thread. Furthermore, there is no indication that the thread becomes taut after a predetermined amount of stretch so that the circumferential thread becomes "inextensible before the elastic limit of the elastic thread is reached".

With respect to the rejection of claims 48-52 and 58 over the combination of Levin '444 in view of Mercuri '007 and the rejections of claims 53 and 59-62 over Levin, Mercuri and Mintz '231 as well as the rejection of claims 48-52 and 58 over the combination of Krauss and Mercuri and the rejection of claims 53 and 59-62 over the combination of Krauss, Mercuri and Mintz, Appellants submit that the proposed combination necessary to meet the claimed limitations are not obvious variations to one of skill in the art having the references of record before them.

The reference to Mercuri '007 is concerned with an elastic circumferential thread which can be a combination of a non-extendible thread and an elastic thread but there is no disclosure of yarn wrapped around or along the length of the thread.

The reference to Mintz '231 uses an elasticized or non-elasticized yarn with a non-elasticized yarn including synthetic thread which has no stretch capability. The only stretching available to any knitted product in Mintz is due to the stretchability of the resultant product. There is no disclosure in Mintz of the yarn wrapped around an elastic thread and there is only a reference to either a single strand of rubber which can be knit into a structure or a single strand or rubber wrapped around two opposing wound threads. The rate of wrapping is such that the elasticity is not limited by the outer wrapping. For these reasons, Appellants submit that the dependent claim 38-53 and 58-62 are not properly rejected over any combination of either Levin '444 or Krauss '905 with Mercuri '077 or Mintz '231.

Dependent claims 46-57 and 63-64 are separately patentable from independent claim 45 as they refer to the particulars of the knitted tube with the circumferential threads attachment or additional fibrous casing coextensive with the tubular knit or the defined relationship between the diameters of the threads becoming taut when equal to the diameter of the tubular fibrous casing of claim 48. Dependent claims 50 and 51 particularly relate features of the fibrous casing which, in addition to being separately patentable, are not available from the references or any combination of the references. The dependent claim 54-57, 63 and 64 relate to the tubular casing and securing of the circumferential and longitudinal threads with respect to the knitted tube and the manner of securing. Thus, these dependent claims are separately patentable and not available from the references and accordingly do not stand or fall with independent claim 45.

APPENDIX

A copy of the claims are attached as an Appendix.

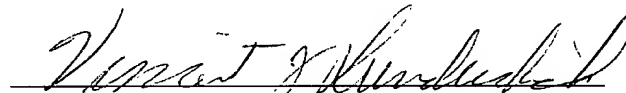
CONCLUSION

Therefore, Appellants respectfully request that the decision of the Examiner in rejecting claims 45-66 should be REVERSED.

This Appeal Brief is accompanied by a check in the amount of \$340.00 in payment of the required appeal fee. This amount is believed to be correct, however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 05-1323, Docket No.: 010414.50147US. A triplicate copy of this Appeal Brief is attached.

Respectfully submitted,

December 6, 2004



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APPENDIX

45. A tubular structure casing for use with food products, comprising:
circumferential threads extending around a periphery of a tubular casing and spaced at intervals along said tubular casing, said circumferential threads comprising an elastic thread in combination with a yarn wrapped around and along a length of said elastic thread, wherein a number of turns of said yarn are provided around said elastic thread for a given length of said circumferential threads are determined as a function of an elastic limit of said elastic thread so that said circumferential threads become taut after a predetermined amount of stretch due to said yarn being straightened to an extent where said yarn resists tensile force whereupon said circumferential threads become inextensible before the elastic limit of said elastic thread is reached.

46. A tubular casing according to claim 45, further comprising a knitted tube with said circumferential threads attached to said knitted tube.

47. A tubular casing according to claim 45, wherein said tubular casing is a tubular net comprising radially spaced longitudinal threads in connection with said circumferential threads and wherein said circumferential threads comprise a continuous thread extending spirally along said tubular casing.

48. A tubular casing according to claim 47, further comprising a tubular fibrous casing located within a co-extensive with said tubular net, said fibrous casing comprising an inner liner for said tubular net.

49. A tubular casing according to claim 48, wherein said circumferential threads become taut at a diameter which is substantially equal to the diameter of said tubular fibrous casing when it is filled.

50. A tubular casing according to claim 49, wherein the diameter of said tubular fibrous casing is greater than the diameter of said tubular net prior to stretching of said circumferential threads so that said circumferential threads apply compressive force to said fibrous casing as it is being filled.

51. A tubular casing according to claim 50, wherein the diameter of said fibrous casing is between 2 and 4 times greater than the diameter of said tubular net prior to stretching of said circumferential threads.

52. A tubular casing according to claim 50, wherein the diameter of said tubular net when said circumferential threads become taut is smaller than the diameter of said fibrous casing so that said circumferential and longitudinal threads press inwardly against said fibrous casing.

53. A tubular casing according to claim 48, wherein said fibrous casing is folded flat with at least one pleat so that its width is reduced to fit within said tubular net.

54. A tubular casing according to claim 45, wherein said tubular casing is a knitted tube that is stretchable and impermeable to said food products and longitudinal threads in combination with said circumferential threads, said circumferential and longitudinal threads secured to and spaced, respectively, along and around said knitted tube, said knitted tube being stretchable after said circumferential threads become taut so that said circumferential and longitudinal threads press into a surface of said food product so that a quilted surface pattern is applied to the surface of said food products in contact with said tubular casing.

55. A tubular casing according to claim 54, wherein said circumferential and longitudinal threads are secured to said first tubular portion during knitting of said knitted tube.

56. A tubular casing according to claim 54, wherein said circumferential threads are secured to said knitted tube so as to form a continuous spiral along said knitted tube, said longitudinal threads comprise interlocking loop stitches, each said loop stitch extending between said circumferential threads.

57. A tubular casing according to claim 54, wherein said circumferential and longitudinal threads are secured to an outer surface of said knitted tube.

58. A tubular casing according to claim 51, wherein the diameter of said tubular net when said circumferential threads become taut is smaller than the diameter of said fibrous casing so that said circumferential and longitudinal threads press inwardly against said fibrous casing.

59. A tubular casing according to claim 49, wherein said fibrous casing is folded flat with at least one pleat so that its width is reduced to fit within said tubular net.

60. A tubular casing according to claim 50, wherein said fibrous casing is folded flat with at least one pleat so that its width is reduced to fit within said tubular net.

61. A tubular casing according to claim 51, wherein said fibrous casing is folded flat with at least one pleat so that its width is reduced to fit within said tubular net.

62. A tubular casing according to claim 52, wherein said fibrous casing is folded flat with at least one pleat so that its width is reduced to fit within said tubular net.

63. A tubular casing according to claim 55, wherein said circumferential threads are secured to said knitted tube so as to form a continuous spiral along the length of said knitted tube, said longitudinal threads comprise interlocking loop stitches, each said loop stitch extending between said circumferential threads.

64. A tubular casing according to claim 55, wherein said circumferential and longitudinal threads are secured to the outer surface of said knitted tube.

65. A tubular casing according to claim 56, wherein said circumferential and longitudinal threads are secured to the outer surface of said knitted tube.

66. A tubular casing according to claim 63, wherein said circumferential and longitudinal threads are secured to the outer surface of said knitted tube.